

2008

Top Three Accomplishments

Social & Behavioral Sciences
Medical School Curriculum
Consortium

Supported by the Office of Behavioral and
Social Sciences Research (OBSSR)
National Institutes of Health

Patricia Carney, PhD, Rita Charon, MD, PhD, Alan Cross, MD,
Debra Litzelman, MD, MA, Paul Marantz, MD, MPH, John Rogers,
MD, MPH, Jason Satterfield, PhD, Susan Skochelak, MD, Margaret
Stuber, MD, William Toffler, MD



Overview of a United Effort

In 2004, the Institute of Medicine released a report (1) summarizing how undergraduate medical school curriculum should be enhanced to address critical health issues faced in the United States (U.S.) today. One major finding was that approximately half of all causes of mortality in the U.S. are linked to social and behavioral factors such as smoking, diet, alcohol, sedentary life-style and accidents (2). It is generally recognized that biomedical research cannot address these issues. Less than 5% of the more than two trillion dollars spent on healthcare annually in the U.S. is devoted to reducing behavioral and social risk factors (3, 4). The IOM also found that the curriculum in most U.S. medical schools does not provide sufficient teaching about these behavioral and social risk factors, despite the fact that significant mortality and morbidity are associated with them (1).

In response to the IOM report, the National Institutes of Health (NIH) awarded grants to nine medical schools (**Table 1**) to develop, pilot, and disseminate behavioral and social sciences modified curricula across the six Domains identified by the IOM (of note is that the IOM suggested revised curriculum integration rather than the development of new courses): 1) Mind-Body Interactions in Health and Disease, 2) Patient Behavior, 3) Physician Role and Behavior, 4) Physician-Patient Interactions, 5) Social and Cultural Issues in Health Care, and 6) Health Policy and Economics. The collaborations and the curricular innovations are described in detail elsewhere (5).

Table 1. Participating Medical Schools

Medical School Awardees of NIH K07 Grants to Enhance Behavioral and Social Sciences in Undergraduate Medical Education	
<i>Medical School</i>	<i>Principal Investigator</i>
Albert Einstein College of Medicine	Paul R. Marantz, MD, MPH Professor of Clinical Epidemiology and Social Medicine Associate Dean for Clinical Research Education
Baylor College of Medicine	John Rogers, MD, MPH Associate Professor of Medicine
Columbia University College of Physicians and Surgeons	Rita Charon, MD, PhD Professor of Clinical Medicine
David Geffen School of Medicine at the University of California, Los Angeles	Margaret Stuber, M.D. Jane and Marc Nathanson Professor of Psychiatry
Indiana University School of Medicine	Debra K. Litzelman, M.D., M.A. Associate Dean for Medical Education & Curricular Affairs Richard Powell Professor of Medicine
Oregon Health and Science University	William L. Toffler, M.D. Professor and Director, Predoctoral Education
University of California School of Medicine	Jason M. Satterfield, Ph.D. Director, Behavioral Medicine Associate Professor of Clinical Medicine
University of North Carolina School of Medicine	Alan W. Cross, M.D. Professor, Social Medicine
University of Wisconsin School of Medicine and Public Health.	Susan Skochelak, M.D., M.P.H. Professor of Medicine Senior Associate Dean for Academic Affairs

Briefly, the projects vary with respect to the focus of the interventions, but all nine medical schools are addressing how to incorporate behavioral and social sciences content throughout all four years of medical school in both the preclinical and clinical curricula. Examples of the curricular changes implemented include incorporation of bio-psychosocial approaches that stress holistic, culturally sensitive, and interactive approaches to patient care, development of student empathy, communication, and teamwork skills with a particular focus on patient safety (6-8), and promotion of lifelong habits of self-directed learning and self-care.

Approximately 6,100 medical students will be affected by curricular innovations over the next 2 & ½ years of the five-year collaborative (5). Individual institutions in the collaborative are using a variety of evaluative methods and tools (e.g., curricular mapping, qualitative and quantitative assessments) to evaluate the effectiveness of these curricular innovations, and we believe that the results from these evaluations will help promote the dissemination of effective components and ideas to other medical schools.

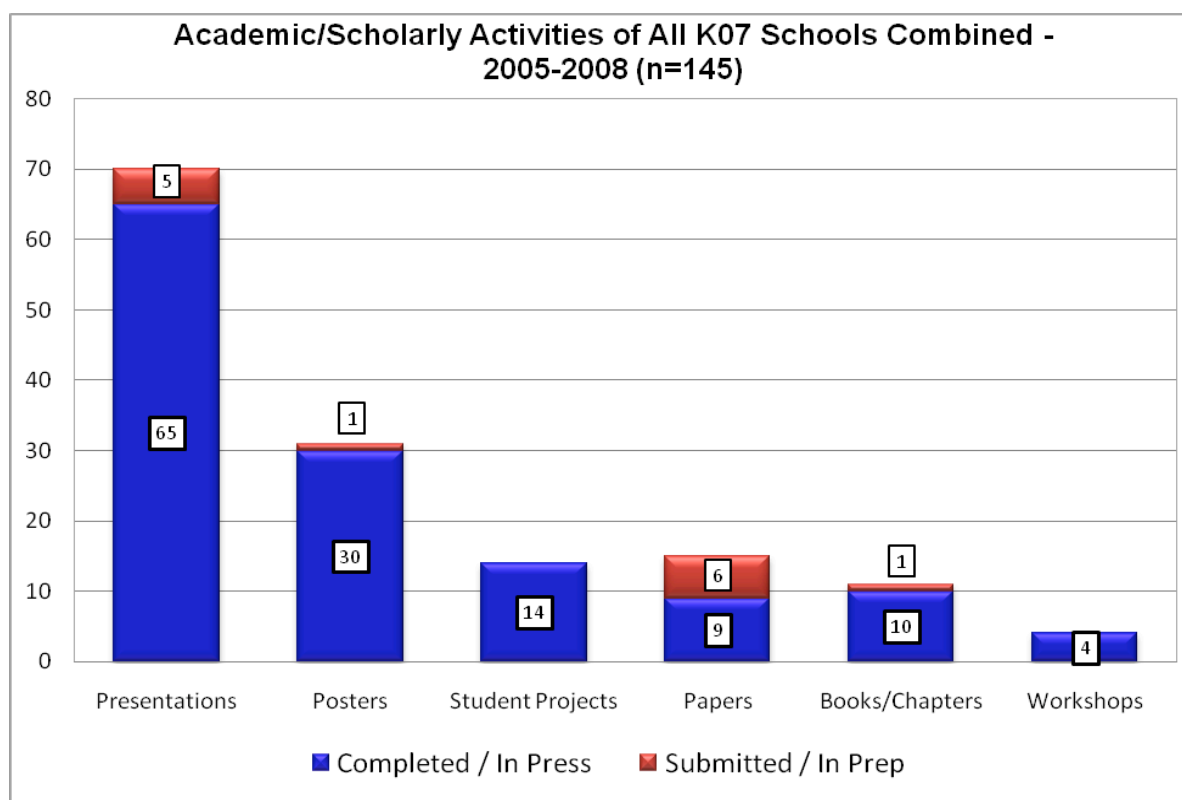
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TOP THREE ACCOMPLISHMENTS FOR THE CONSORTIUM

1- Development of an Evaluation CORE

With the selection of nine medical schools to integrate social and behavior sciences as core elements of the undergraduate medical school curriculum, an important opportunity arose. The nine schools came together to form a collaborative, and in turn to optimize evaluative interactions within the collaborative, one school (OHSU) submitted an administrative supplement to create an Evaluation Core. This Core, overseen by author (Carney), has allowed for a more comprehensive comparative set of analysis that has produced scholarly activities that each school working alone could not accomplish. Mechanisms to disseminate what we have accomplished are impressive (**Figure 1**), including 145 dissemination activities, over two-thirds of which are presentations (oral or poster) at national medical education meetings, and a growing number of publications (n=19 to-date). The number of student research projects in the social and behavioral sciences is also growing. Clearly, this effort has already been a successful model of NIH funding to support educational initiatives in medical school. We hope it will provide a model for future initiatives in medical school and residency training.



Evaluation Accomplishments To-date

- Worked with each institution's IRB to obtain approval to create identifiable longitudinal cohorts for ongoing data linking.
- Created a matrix of outcome measurements by IOM Domain and by medical school.
- Successfully collected nationally available data relevant to behavioral and social sciences from the AAMC graduation questionnaire from all nine schools and in the process of obtaining acceptance and publishing these efforts.

Products and Dissemination

- D Hollar, from UNC, led the task to publish the description of each school's efforts to transform their medical school curriculum in the Annals of Behavioral Science and Medical Education.
- A poster about the use of the Association of American Medical Colleges (AAMC) graduation questionnaire was presented at the AAMC conference in November 2007.
- A presentation was made at the Society of Teachers in Family Medicine conference in January 2008 about the utility of pooling AAMC data and what changes our consortium will be able to detect.

Type of Dissemination Status Month-Year	Authors	Title	Venue
Paper Published Jun-07	Hollar D, Satterfield JM, Carney PA, Graham M, Wimmers P, Swiderski DM, Skochelak SE, Dewey C, Litzelman DK, Stuber ML, Cross AW, Charon R, Chappelle KG, Marantz PR, & Naqvi Z.	The National Institutes of Health Social and Behavioral Science Consortium: An Introduction and Progress Report on Undergraduate Medical Education Curricular Innovations.	Journal: Annals of Behavioral Science and Medical Education, 13(2), 60-68.
Paper In Review August-08	Patricia A. Carney, Rdesinski, RE, Blank, AE, Graham, M, Wimmers, P, Chen, HC, Thompson, B, Jackson, SA, Foertsch, J, and Hollar, D	Utility of the Association of American Medical Colleges' (AAMC) Graduation Questionnaire to Study Behavioral and Social Sciences Domains in Undergraduate Medical Education.	Journal: Academic Medicine
Poster, AAMC Presented Nov-07	Carney, PA, Rdesinski, RE, Blank, AE, Chen, C, Foertsch, J, Graham, M, Hollar, D, Jackson, SA, Thompson, BA, and Wimmers, P	Efforts of a multi-institutional collaborative to study the impact of innovative curricula on behavioral and social sciences.	National meeting
Presentation, STFM PreDoc Presented Jan-08	Carney, P.A., and Rdesinski, R.E.	Multi-institutional Medical Education Research Consortia: Design, Development, and Preliminary Findings.	National meeting

Plans for the Next Project Year

- Map common variables of instruments that measure professionalism and the hidden curriculum in medical school within the Physician Role & Behavior IOM Domain.
- Share Clinical Practice Examination cases and data across IOM Domains.
- Explore how schools have developed the revised curriculum, and what behavioral and social science experts were included in these revisions.
- Explore how early curriculum on behavioral and social sciences should be addressed in undergraduate medical education and should the admissions committee be advised on changes that could be made to their policies.
- Explore how effective a web-based interactive platform is in disseminating revised curriculum and relevant measures to detect change.
- Use a mixed methods approach to evaluate institutional change, faculty development and the effects of revised curriculum.
- Determine factors associated with successful PI and Evaluator collaboration

2- Collaborative Activities within the Consortium

- a. Alan Cross, M.D., University of North Carolina, coordinated all of the members of the Consortium as they inventoried their existing behavioral and social science curriculum and started to learn from one another.
- b. Patty Carney, Ph.D., Oregon Health & Science University, coordinated the evaluators at each site to establish common measurement tools and strategies to allow for a unified longitudinal assessment of progress.
- c. Deb Litzelman, M.D. at Indiana University hosted a series of three-day Immersion Conferences, to help facilitate Relationship Centered Care programs. Members of our Consortium of Schools that have sent representatives to these conferences include the University of Wisconsin, UCLA, and Columbia University.
- d. Susan Skochelak, M.D. of Wisconsin University organized a joint presentation of the work of the consortium at the AAMC annual meeting in 2007, in which materials developed by all of the institutions were made available.
- e. Margaret Stuber, M.D. at UCLA and Jason Satterfield, Ph.D., at UCSF submitted an R25 application to the National Cancer Institute, with commitments from all of the other members of the Consortium to consider use of the curricular elements on Integrative Medicine that would be created.
- f. Rita Charon, M.D., Ph.D. of Columbia University visited other institutions in the Consortium to talk about the use of reflective writing with faculty, medical students, and residents, and encourage this aspect of the curriculum.
- g. William Toffler, M.D., of Oregon Health & Sciences University organized a joint presentation at the Society of Family Medicine annual meeting, with multiple members of the Consortium represented.
- h. Paul Marantz, M.D., M.P.H., of Einstein College of Medicine organized a meeting of the Consortium with representatives of the funding Institutes at NIH, as well as representatives of the AAMC and the CTSA in 2008.
- i. David Hollar, Ph.D., University of North Carolina, was first author on a paper describing the formation and initial work of the Consortium.

3- National Body of Experts in SS/BS in Medical Education

The Principal Investigators, evaluation directors, and several of the Senior/Key Personnel from each of the nine schools awarded the K07 in the inaugural round have met regularly throughout the grant period. In a series of face-to-face meetings at NIH and at the AAMC Annual Meetings and monthly conference calls among the PIs, faculty from these nine schools have come to know one another's work on this grant quite well. They have become very valuable internal consultants and reviewers for one another's work. PIs have visited one another's campuses to consult with and to inspire one another's K07 projects and are now collaborating on projects in SS/BS beyond the K07. The K07 PI group has become a national nidus of influence and brainstorming power. Were we to do a network analysis beginning with the K07 PIs, we would see vast radii of connections among the nine schools

extending nationally and internationally way beyond this grant, all of it powered by the initial gathering of these nine people.

There are consequential sequelae of this active networking triggered by the awards. We have become a national body of experts in Social Science/Behavioral Science in medical education and have been recognized as such. Because we invited participation in our deliberations from leadership figures from AAMC, CTSA, USMLE, ACGME, and individual institutes of the NIH, we have been called upon by those bodies to exert leadership in turn. For example, several of our members will be appointed to the Medical School Outcomes Project on Social and Behavioral Sciences for AAMC. Our members have taken an active role in writing USMLE questions for social and behavioral sciences and in supporting and even defending the inclusion of our topics in the face of considerable back-pressure from basic scientists. Because most of the nine schools in the first cohort were awarded CTSA's, the PIs and Key Personnel on the K07s have aggressively worked at the local and national level to insert concerns and goals and expertise from SS/BS in both content and process of clinical translational research. As urgent topics surface at any one of our schools—for example, the need to tailor the admissions process to seek out students gifted in SS/BS—our consortium will enable us quickly to sort and find and adopt best practices from among all our schools, no doubt quickening the process of beneficial change. We believe that by having become a visible and nationally recognized body of expertise in SS/BS within academic medicine, we champion and we further the cause of enhancing medical practice with these skills and concerns.

Becoming a Doctor at the Albert Einstein College of Medicine

NICHD Grant K07 HD051528

Paul R. Marantz, MD MPH

Top Three Accomplishments:

1. A major revision to the clinical clerkships: a new, longitudinal course before and throughout the clerkship year entitled “Patients, Doctors, and Communities.”

Spurred by the funding of this K07 grant, Einstein students experienced the first major change in the clerkship curriculum in the school’s history. In addition to the traditional, specialty based, inpatient-oriented clinical experiences of the third year, a new interdisciplinary course was created that focused on key aspects of the IOM report and this K07 grant: students’ professional development, communication skills, and social and behavioral issues in medicine. A broad, overarching goal is to counteract the “hidden curriculum.” The PI served as course leader as the course was initiated; a creative co-investigator, Dr. Eric Green, took over as course leader during the second year.

In Patients, Doctors, and Communities (dubbed “PDC” by the students), students meet in small groups (6 to 10) with one or two preceptors (when paired, usually a physician is paired with a ‘behavioralist’ like a psychologist). Sessions begin at the end of the second year of medical school, as “preparation for the clerkships,” and continue every 3-4 weeks throughout the clerkship year. Students return from their clinical sites to the medical school for these sessions, each group comprising students rotating through many different specialties. Each session begins with a “checking in” period where any important issues are addressed, followed by the specific topic for the session. Students prepare for class with assigned readings and, usually, patient interviews and/or narratives, which are written and submitted to the preceptor in advance of class. All clinical examples are based on the students’ own experience (i.e., there are no “paper cases”); in-class ‘skills practice’ is sometimes complemented by simulated patients, or role-play.

We are in our third year of this program. Surprisingly (at least to the course planners) the clerkship faculty were less resistant to this change than the students. The first cohort of students was deeply resentful of the “extra” work involved. Indeed, the curriculum was revised to make course demands more aligned with the demands of the clinical rotation, although PDC remains a rigorous course. With passing years, students have appreciated this course more and more. Our faculty have been dedicated and enthusiastic (with students praising the faculty even during the first year of the course). We have noticed some subtle changes in just 2.5 years: where houseofficers used to say to students “Why are you leaving the wards for that nonsense?”, students now report their residents saying “I wish they had a course like that when I was a medical student.”

2. Major changes in the teaching of communication skills to medical students.

While there had been significant efforts afoot to review and enhance our medical students’ education in communication skills, this process received a sharp boost with the receipt of this K07 award. The leader of this effort has been one of the co-PIs of this K07 grant, Dr. Felise Milan (who was recently appointed course leader of our Introduction to Clinical Medicine (ICM) course. Among the key accomplishments that have occurred during the last 3 years:

- We have established school-wide communication skills model and integrated it throughout the curriculum

In a collaborative and literature based process, the Macy Model was chosen. It was used to develop curriculum revisions, faculty development efforts, and a communication skills checklist to guide teaching and assessment. The checklist is also used to enhance students' self-assessment of communication skills. For the first time, we created a competency based final exam for the first year communication skills course utilizing the checklist for assessment, which is used again in the 3rd/4th years for the clinical skills assessment program. This checklist has been disseminated through a variety of faculty development sessions across the school, including in ICM, at our annual Clerkship Leaders retreat, for ER faculty teaching students and residents, and in the 2nd year physical diagnosis course.

- We have developed exciting collaborations with basic science course leaders, integrating communication skills teaching with their courses.

This has occurred in some of our most high-profile and demanding courses, including Anatomy and our overarching basic science first-year course, Molecular and Cellular Foundations of Medicine (MCFM). For instance, an ICM session on genetic counseling follows their Genetics module, involving skills practice with SPs; faculty development is provided to genetics faculty, including teaching and feedback on communication skills.

- 4th year OSCE for advanced communication skills

We have established an OSCE on delivering bad news at one subinternship (Sub-I) site, which is now being expanded to include other topics and is being studied in a controlled trial. Thus, the educational wasteland of the Sub-I is being infiltrated.

3. Creating an ongoing, sustainable model to assess, develop, evaluate, revise, and integrate curriculum in BSS at Einstein.

From the beginning of this K07 award, a group of 12 "Domain Leaders" has been meeting to collaboratively develop our curriculum efforts. In addition to the Domain Leaders, an "Evaluation Committee" (chaired by co-PI and "professionalism" domain leader, Dr. Deborah Swiderski) has been meeting regularly with the Domain Leaders as well, both at our monthly meetings, in interview/evaluation settings, and providing information, data, and feedback. This group is a mix of faculty experts with extensive medical school teaching experience, and faculty experts with little prior experience in teaching our medical students.

With some not-unexpected bumps along the way, this faculty group has developed major new initiatives: cultural competency curriculum assessment, community-oriented educational programs, a new 'wellness' program providing service and teaching to students (and being studied rigorously by our faculty), a new white coat ceremony for incoming students and a transition ceremony as they enter the clinical years, and several ambitious new programs in development. Our program has had, and will continue to have, great influence on our curriculum development: indeed, many of the Domain Leaders are chairing major curriculum committees, leading courses, or developing new programs within the school.

Relationship-Centered Transformation of Curriculum

NHLBI Grant 5 K07 HL082629-03

John C. Rogers, MD, MPH, MEd

Specific Aims:

Our specific aims are to educate the 21st-century physician through:

- 1) Transforming core student-teacher relationships through strategically reshaping the formal medical school curriculum;
- 2) Transforming student-faculty relationships in the “hidden curriculum” through a multifaceted educator development program;
- 3) Transforming other core relationships in addition to the student-teacher relationship (e.g., student-self, student-student, etc.); and
- 4) Promoting an institutional environment that recognizes and values the mediating influence of relationships and the importance of the behavioral and social sciences in medical student education.

Top Three Accomplishments:

➤ **Enhance formal curriculum**

- 4-year Relationship-Centered Care (RCC) curriculum. The organizing framework for all of the grant-related curricular interventions is the RCC model of clinical practice. The courses with new RCC content:
 - Patient, Physician and Society (PPS) course – first and second year
 - “The Healer’s Art” course elective – first year
 - Longitudinal Ambulatory Clinical Experience (LACE) – third year
 - Capstone Course – fourth year

➤ **Establish competency-oriented curriculum**

- Expand self-assessment and development of learning plans: Students complete self-assessments of their achievement of the Baylor College of Medicine (BCM) MD Core Competency Graduation Goals (CCGGs).
- Develop CCGG-Assessment Matrix: Matrix of the evaluation methods required courses use that objectively assess student achievement of the 53 individual CCGGs.
- Logging and tracking of students: Student portfolios will be reviewed and signed off on semi-annually by the mentors. Each portfolio will include the student’s CV, personal statement, individualized learning plan, self-assessment of CCGGs, knowledge test scores, faculty/resident/peer evaluations, clinical skills assessment (OSCE, CPX), Scholarly Project, reflective writings, extracurricular activities, and awards.

➤ **Establish Learning Communities**

- Mentoring Program: The Curriculum Committee approved the Mentoring Program in December 2007 and charged the Mentoring Task Force to implement the program with the class entering in August 2008. The Mentoring Program has 8 mentors with each dedicating 5% FTE time this first year, increasing by 5% as each new class is added until each Mentor dedicates 20% time to longitudinal relationships throughout medical school with approximately 20 students per class. There are 4 geographic quads with 2 classrooms, lounge area, lockers, and cupboards and a sink for refreshments with 2 mentors and their 40 students assigned to a quad for all 4 years of school. The Mentors began weekly training sessions in July and first met their students during Orientation Week. Besides monthly

meetings with small groups of students, mentors are having 1:1 meetings with their students. Every 6 months, students will individually present their portfolios, including their self-assessments on the Core Competency Graduation Goals (CCGGs) and their learning plans, to their mentors for approval.

- The Mentoring Program is specifically designed to affect relationships in addition to the student-teacher relationship, such as student-self and student-student relationships. These 40 students in each of the 4 geographic quads are divided among 4 PRN (Peer Resource Network) groups that include upper class advisors for each PRN group, typically 2 second-year, 1 third-year and 2 fourth-year students. PRN groups hold social events for their members and foster advising and guidance by upper class students. These 40 students are also divided into small groups of 8-10 students each for the Integrated Problem Solving (problem-based learning) and Patient, Physician and Society courses. As described above, these 40 students are divided into 2 mentor groups of 20 students each that are assigned to 1 of the 8 mentors in the program. These 4 overlapping small groups (mentor, PRN, IPS and PPS) encourage academic and social relationships among the 40 students so they can get to know better a smaller number of people from the entire class of over 160 students. In addition, the topics discussed in the mentor groups deal to a considerable extent with student-self relationships, such as, excelling as a basic science student, balancing social life/family life in medical school, involvement in student activities organizations, exploring available fields in medicine, and opportunities for community involvement.

Human Behavior and Experience in Health and Illness

NHLBI Grant K07 HL082628

Rita Charon, MD PhD

Top Three Accomplishments:

1. Improving Pedagogy for Medical Students:

The K07 has supported an intensive faculty seminar in reflective practice for the teachers of the first- and second-year required courses that cover social science and behavioral science in the medical school curriculum. Teaching of skills of the doctor/patient relationship, health behavior interventions, cultural competence, health policy and justice, and reflective practice has improved demonstrably through our careful tutoring of individual faculty in pedagogic methods.

Student-Led Seminars: The most dramatic example is a wholesale shift from faculty-led discussion groups to student-led discussion groups in the required curriculum. Medical students take turns being student-chairs for their own weekly small group discussions, instilling their own passions and concerns into the curriculum. We have seen growth in student autonomy and student “claim” on these courses in the short course of the grant. This method enables us to teach such complex skills as leadership, tact, peer evaluation, and collective ownership of their educational process.

Student Initiatives in Developing Pedagogic Methods: Students have themselves taken major initiatives in developing teaching and learning methods as a consequence of K07 methods. For example, the Witness Project is an active observation method developed by the PI and her students. With external funding for summer research, a group of medical students, supervised by the PI and members of the K07 seminar, developed training methods and outcomes assessment of this new method of learning from witnessing clinical transactions. Because the students were the fountainhead of the project, there is tremendous buy-in from other students, scores of whom feel deeply committed to further learning of reflective practice. Funds from the K07 will be offered to students as Summer Research Fellowships in narrative medicine/social medicine topics to promote student initiatives in SS/BS learning.

2. Impact on Faculty Skills, Expertise, and Power:

The K07 Faculty Seminar has already become a force within the P&S curriculum. This graduate-level intensive seminar meets weekly through the academic year and is attended by all preceptors for the required first-year Clinical Practice course, the course that teaches interviewing skills, social and cultural aspects of health care, health policy and economics, health behaviors, and reflective practice. Not entirely topic-driven, the seminar is geared toward narratively inspecting the inner lives of its participants so as to strengthen their capacity to reflect on their own clinical practices. Through close reading of literary texts and narrative writing about their own clinical work, the participants become gradually *visible* to one another and to self. They achieve access to the kind of language that enables them to express and therefore perceive their own work with patients and with students. In the process of developing what we call narrative competence, they become visible and terribly valuable to one another as a peer group, a collaborative leadership group, a mutual mentoring circle, and an action group who take up the best interests of our school.

First cohort: The first twelve faculty have now graduated from the K07 seminar. Two members were chosen as co-directors of a new course, “Foundations of Clinical Medicine.” Two members were inducted into the prestigious Glenda Garvey Teaching Academy. Several

members are leaders in the radical curriculum reform underway. Individual faculty participants have adopted aspects of the K07 portfolio as their own scholarly mission—one physician drafted and has carefully crafted and piloted the “P&S Questions,” an interview template that will guide all future teaching of the medical interview at our school. Another inaugural member has taken leadership of the Cultural Competency movement at P&S, including chairing a contentious effort to require Spanish proficiency of all P&S students. Another has spear-headed reflective practice teaching through the third-year clerkships, an effort which will form the backbone of the new intersession model in the reformed curriculum. The PI has spawned several new groups, including outreaches to CTSA, to the School of Public Health, to the School of Nursing, the Nursing Service at the hospital, and to the main campus of the university to form coherent collaborations between the medical school and other efforts toward reflective practice.

Second Cohort: A fresh group of ten faculty members form the second cohort of K07 Seminar. Never having taught in these courses before, these faculty were attracted by what they had heard of the K07 seminar. Such robust recruitment of new faculty for these highly demanding teaching duties is unheard-of. Already, the new cohort members are deeply ensconced in the IOM domains and in developing reflective skills of both practice and teaching.

3. Institutional Impact:

The K07 project is having demonstrable impact on the entire medical school. Dean Lee Goldman met with the seminar last spring to learn in depth about our accomplishments and to endorse, most highly, this model for active and creative participation from faculty. Having just launched a curricular reform, the school is primed for the new leadership emerging from K07. Leadership positions of the curriculum reform—preclinical courses, major clinical clerkships, intersessions in clerkships, fourth-year concentrations—are saturated by K07 participants. Almost every nodal point in the new curriculum is occupied by one of our members. One of the five or six concentration tracks to be offered for P&S students will be “Narrative Medicine/Social Medicine,” unifying the driving principles of our K07 work.

Narrative competence and reflective practice emerge in many corners of the medical center and the entire university as organizing principles and as visionary models for effective patient care. Most of this effort can be traced back to the K07 and its associated projects in narrative medicine. Our foci on team building, collective reflection, attention to the inner life, and health care justice have all been elevated to high visibility within the medical center. We will continue to use the platform of the K award to push these principles and to endorse the inclusion of social science and behavioral science into the very heart of health care training and practice.

Indiana University School of Medicine Behavioral and Social Science Integrated Curriculum

NIAMSD Grant K07 AR53812

Debra K. Litzelman, MA, MD

Top Three Accomplishments:

The Indiana University School of Medicine (IUSM) continued to improve the behavioral and social science curriculum by infusing social and behavioral science (SBS) into four MS 1 courses, two MS 2 courses, one MS 3 intersession, and one MS 4 required clerkship for a total of 93 hours of IUSM medical student contact. This integration was made possible by the NIH Behavioral and Social Science Integrated Curriculum (BASSIC) grant.

Due to recent inclusion of SBS into the curriculum at the Indianapolis and South Bend campuses, the IUSM scored above the USMLE Step 1 mean performance in Behavioral Science items for the first time in 10+years. These test takers represent the Indianapolis cohort who first piloted the integration of Social and Behavioral Science in TBL sessions in their first and second years, as well as students who piloted a Behavioral Science course at the South Bend Campus.

The following three curricular activities represent ways in which the BASSIC grant has enabled the IUSM – Indianapolis campus to succeed in better preparing our students in social and behavioral sciences, and therefore are our greatest achievements to date.

Health Policy and Economics (HPE) – Simulation Board Game

A small group of health economic experts from the IUSM BASSIC Learning Community (LC) created a scenario-based simulation board game for HPE, a first-year course, which utilizes one patient experiencing three different clinical events.

The patient's clinical condition was further classified as high or low biologic risk (proxy for severity of illness), within a system of care in which the variation of available resources was either high or low utilization, resulting in four different combinations of patient risk and utilization level for the scenario team-based exercise. The board game was created to introduce the concept that more care does not always mean better care. It also addresses the impact physicians' decisions make in terms of cost and health care quality to allocate financial resources to critical sectors of care.

The evaluation for this session of the HPE course has been very positive and beneficial to students. One student commented, "The game was beneficial to really understand the pathway of a patient through the different levels of health care and how that can affect costs." Another student commented, "It brought to my attention just how little say a patient might have in health care spending."

The creators, Thomas Inui, Wendy Morrison, and Gene Beyt, are presenting the board game at the 2008 AAMC Annual Meeting. This GEA/GSA mini-workshop, Teaching Health Policy and Economics: Team-Based Learning Using Managerial Simulations, will give participants a hands-on demonstration of the game and the BASSIC – Health Policy and Economic curriculum.

Council of Elders

As part of the IUSM Geriatric Education Network of Indiana (GENI) project, MS 1 and 2 students statewide are given the opportunity to dialogue with a panel of "well" older adults (the Council of Elders) to enhance their communication skills and learn about successful aging. This opportunity maps to objectives in both the Physician Role and the Behavior and Physician-Patient Interaction BASSIC domains.

At the end of this panel students reflect on their own self-awareness of biases and assumptions of older adults, and then discuss how these biases or assumptions may influence their attitude or emotional reaction to older patients. Students often realize through this experience that their feelings about interacting with older adults is augmented or changed.

Overall, students rate the Council of Elders as a positive one and many have stated they have a “better understanding of older adults” after this experience. Dr. Glenda Westmoreland, the developer of the Council of Elders, will have her manuscript, Improving Medical Student Attitudes toward Older Patients through a Council of Elders and Reflective Writing Experience, has been accepted for publication in the Journal of the American Geriatrics Society.

Council of Family Violence Survivors

Based on the parallel model of the Council of Elders, the Council of Family Violence Survivors was created to help 3rd year medical students with asking difficult/sensitive questions regarding abuse in the home. A subgroup of the BASSIC LC created a 4-hour intersession to give 3rd year medical students the opportunity to hear first hand from victims of family violence, to observe or practice interviewing/screening of standardized patients in each a child abuse, partner abuse, and an elder abuse/caregiver burnout case, as well as the opportunity to ask screening/reporting questions to a panel of professionals (i.e. law enforcement, child protective services, social worker, etc.).

After the intersession, students are asked to write a reflection of how this experience was most beneficial to them in the form of knowledge growth, perception/attitude toward child, intimate partner, and/or elder abuse, and how if any it benefitted their self-awareness and personal growth. These reflections provide proof that the session objectives are successfully being obtained.

The session evaluations have been very positive, the average rating of each session was at or above 4.5 on a 5-point likert scale with 5 being excellent. Many students wrote positive comments about the session, one student commented, “This session was absolutely fabulous! Wonderful timing, completely relevant, and provided great/necessary info. Even the small groups were really productive and made me think.”

Dr. Rose Fife and members of the Family Violence Curriculum Planning group have submitted a Continuing Medical Education course proposal, Development of a New Intersession Course for Third-Year Medical Students to Improve Knowledge, Skills, and Attitudes about Family Violence, to the Clarian Health Partners. Dr. Fife would like to model the intersession into a 6-8 hour course for faculty, trainees, and nurses in the new high-tech Simulation Center with funding through a Clarian Values Educational Grant.

Behavioral and social sciences as core elements of physician training

NCI Grant K07 CA121457

William L. Toffler, MD

Top Three Accomplishments:

OHSU's comprehensive goal is to build a longitudinal curriculum incorporating all six behavioral and social science domains identified by the IOM as essential to the patient-centered and effective practice of medicine. This grant project has provided OHSU with the opportunity to review, revise, and rebuild the full four-year curriculum, and to bring together faculty experts in behavioral and social sciences with existing course leadership. It has also engendered educational research, publications, and national presentations stressing the importance of physician training in the behavioral and social sciences. The following are three of what we see as our most valuable and far-reaching accomplishments to date:

#1 – Revitalization of Health Policy and Economics Curriculum

Prior to the grant project, the teaching of health policy was disjointed, redundant, and based on student evaluations and demonstrated lack of understanding, it was largely ineffective. Redesigned by grant leaders in health policy, the entire Health Policy & Economics sequence (24 hours) has now been fully developed, implemented, and integrated into the Principles of Clinical Medicine two-year curriculum. The quality of individual sessions has been vastly improved with an eye to appropriate sequencing of subject material and increasing student engagement in health policy topics through demonstrated relevance. The foundation of these changes has been found to be strong enough to withstand a change of leadership this year, and is structured in such a way as to be exportable to other institutions. Innovative aspects of new Health Policy & Economics curriculum include

- Speakers from state government and national health policy organizations (e.g. John Kitzhaber, MD) who demonstrate relevance and bring issues to life for students
- Student-run five-session sequence promoting student interest and buy-in to health policy learning
- Ethnographic interview assignment emphasizing real-life effects of health policy on patients
- Six additional hours of health policy didactics in Year 3 Family Medicine Clerkship focused on continuity, comprehensiveness, coordination, and context of current and potential models of care
- Increased respect for and valuing of health policy and economics by students, as evidenced attitudinally in classes as well as through the student-driven formation of a new health policy interest group, request for an elective on new models of care, and participation in "Cover the Uninsured Week" activities

#2 – Expansion and Enhancement of Training in Doctor-Patient Communication

The grant project has enabled us to review and revise every session in the first and second year involving doctor-patient communication. Curriculum planners have emphasized the importance of student participation in learning activities which enable them to actually practice communication and psychosocial skills, and activities for sessions have been revised accordingly to include role playing and direct feedback to students. Newly developed sessions have been added throughout the curriculum specifically focusing on providing students with better training and practice in communication skills, and faculty development is focused on training faculty how to effectively teach using new modalities such as on-line playback of student interactions with simulated patients. In addition, grant-supported case development of Objective Structured Clinical Exams (OSCEs) has enabled courses to take advantage

of new testing facilities and statistical tools in a move toward more rigorous and individualized evaluations of student performance. Innovative aspects of the new Doctor-Patient curriculum include

- Two redesigned introductory sessions on patient interviewing emphasizing role play and skill practice rather than case discussion
- Additional Year 1 session on the BATHE technique, aimed at enhancing student confidence and skills eliciting and responding to psychosocial issues of patients
- Increased opportunities (one in Year 1, two in Year 2) for students to interact with simulated patients and be individually evaluated in OSCE session
- Two new sessions requiring students to bring in videos of interactions with simulated patients and watch these in small facilitated groups, promoting increased communication skills in giving and getting feedback as well as advancing students' skills in communicating with patients
- Motivational interviewing session added to Year 2 curriculum along with a follow-up session in the Year 3 Family Medicine Clerkship specifically focused on how to talk with patients about smoking cessation and other behavioral changes

#3 – Increased Institutional Acceptance of Importance of Behavioral and Social Sciences in Medicine

One of the most impressive benefits of the grant project at OHSU has been at the faculty and institutional level. Faculty have been extremely supportive of proposed changes as well as the rationale behind changes. Though we cannot attribute all changes to the grant project, there has been a renewed energy and enthusiasm for teaching throughout the medical school. With multidisciplinary planning committees and course directors working toward the same overarching goal, connections have been made and relationships built. Faculty and volunteer faculty not involved directly in planning the new curriculum have been offered new opportunities to learn from course leaders and each other. In short, we are in the process of creating an environment in the School of Medicine not only conducive to the improved teaching of behavioral and social sciences, but one in which faculty may find more meaning in their own roles as clinicians and teachers. Highlights of this process include:

- Increased emphasis upon BSS knowledge, skills, and attitudes in student evaluation
- Increased respect and valuing of behavioral and social sciences by faculty and institution
- Improved role modeling by faculty and residents in patient care
- Increased collegial relationships between departments, disciplines and individual faculty members
- Increased opportunities for faculty development in behavioral and social sciences
- Increased opportunities for faculty to demonstrate leadership and scholarship in the behavioral and social sciences
- Improved ability to assess and address hidden curriculum issues with faculty and residents and promote professionalism at an institutional level

Medical Student Behavioral Science Learning/Teaching

NCAM Grant K07 AT003346

Margaret Stuber, MD

Top Three Accomplishments:

1. Medical student curriculum

We have evaluated and improved the overall UCLA medical student curriculum in the social and behavioral sciences, strengthening student understanding and skills in health care delivery systems, medical economics, mind-body medicine, medical ethics, reflective writing, and cultural competence.

- a. We rewrote the entire third year of the Doctoring curriculum to emphasize practice-based learning, professionalism and systems-based practice. We added new components to the curriculum to teach about medical economics, health disparities and health care disparities.
- b. We implemented extensive interdisciplinary faculty development and training in complementary and alternative medicine, integrative medicine, health disparities, health care delivery systems, disability and use of reflective writing.
- c. We reorganized and restructured the medical neurosciences course in the second year of the curriculum to emphasize the cultural impact on behavior, mind-body medicine, complementary and alternative medicine, and integrative medicine.
- d. We significantly expanded the first year medical school curriculum to include exposure to complementary and alternative therapies in the management of pain. This included creation of DVDs on the use of yoga for back pain and chiropractic approaches to pain, and a lecture on risks and benefits of herbs and supplements.
- e. We submitted an R25 application to NCI to develop curricular modules on integrative medicine for prevention and treatment of symptoms related to cancer survivorship.
- f. We presented our findings at national annual meetings of the Association for Directors of Medical Student Education in Psychiatry, Society for Family Medicine, Association of American Medical Colleges, American Association of Cancer Educators, and the Association for the Behavioral Sciences and Medical Education. We have also presented posters and papers at international meetings in Italy, Norway, Australia, and the Czech Republic.

2. Graduate medical education

We have worked with graduate medical education at UCLA to change the teaching and assessment of professionalism, system-based practice, and practice-based learning in our residency and fellowship programs.

- a. We created and implemented assessment tools for effective feedback to residents working in medical or surgical settings.
- b. We created and implemented a resident/fellow self-assessment tool to enhance resident self-reflection. This helps residency programs meet one component of the Practice Based Learning Core Competency.
- c. We created and made available for implementation multiple-source clinical assessment tools for required ACGME competencies.
- d. We met with all of the administrators, training directors, and chief residents of all of the programs at least once a year for the past two years to discuss teaching and assessment of

the ACGME Core Curriculum Competencies. We are discussing more frequent meetings for support and social and behavioral science education for the chief residents.

- e. We developed and implemented a 60-90 minute interactive workshop for residency programs at UCLA, which addresses the development, maintenance and enhancement of the Professionalism Core Competency for the health care setting. We have delivered twelve of these interactive workshops with administrators, faculty, medical students, fellows and residents, reaching over 200 people thus far, with many others planned.

3. Structure and culture of the Medicine within and beyond our School

We have started to change the overall culture of the School of Medicine at UCLA to extend beyond traditional boundaries. Through new partnerships and innovations, we are attempting to enhance the role and responsibilities of students, residents, faculty and staff with regard to patient care and clinical teaching.

- a. We initiated collaboration between the schools of nursing and medicine to jointly teach third year medical students and advanced practice nursing students in small group seminars. Topics include teamwork, ethics, systems of care, medical error, and clinical decision making. The nurses are very enthusiastic about this after the first two months of the program.
- b. We created a new “abuse sensitivity” survey instrument for medical students and residents to pair with our annual anonymous assessment of perceived abuse. Using this tool, we found that the quality and quantity of abusive behavior described by students in our surveys is not explained by increased sensitivity to perceived abuse. Our finding will be used by faculty to delineate the prevalence of unacceptable faculty and resident behavior and to clarify what is perceived as abusive by the students. This will contribute to our compliance with JCHO requirements to prevent an environment of harassment and abuse.
- c. We developed a new curricular structure for the third and fourth years of the medical school designed to increase faculty responsibility for student learning, and to offer students more patient responsibility and more continuity with faculty and sites.
- d. Dr. Stuber is a new member of the reconstituted Admissions Policy Committee, which has been asked to reevaluate the criteria and methods used to select students for our school of medicine, and to create more valid and reliable methods.
- e. We are working with the CEO of the Medical Enterprise to design programs for medical students and residents to understand and participate in continuous quality improvement efforts and research in the hospitals and clinics.
- f. We utilized the input received from other members of the consortium, including Visiting professor, Rita Charon, M.D., Ph.D. from Columbia who discussed use of narrative writing in Grand Rounds in April 2007 (www.PsychiatryGrandRounds.com). Dr. Charon also met with the Medical Education Committee within the medical school, and the departments of History and English within the university.
- g. We participated in a three-day immersion conference on appreciative inquiry and organizational change at Indiana University. Knowledge gained from this conference was immediately applied to many of the accomplishments noted in this review.
- h. We created a website, www.medicalprofessionalism.org to disseminate our materials globally.
- i. Dr. Stuber is now a member of the Board of Directors of the UCLA Collaborative Centers for Integrative Medicine.

Integrating the Social and Behavioral Sciences in Undergraduate Medical Education

NIH/OBSSR/NCCAM Grant K07 AT003131-01

Jason Satterfield, PhD

Top Three Accomplishments:

1. Creation of a social and behavioral science (SBS) “pipeline” program to train the next generation of physician scientists doing social and behavioral science research.

The “SBS Pipeline” has completed two full cycles of funded student research projects where students were paired with core SBS mentors and given advanced training in SBS research methods, writing, and dissemination. A funding cycle will be repeated yearly with larger cohorts and new groups of SBS mentors. The seven projects were as follows: “Searching for the ‘Disappeared’ Children of El Salvador,” “Culturally Competent Care of Patients with Disabilities,” “Conceptions of Mental Illness in HIV/AIDS among Traditional Healers in Uganda,” “Illness Narrative Audio Project,” “Teaching Humanism & Cultural Humility Through Global health Immersion Programs: A Multi-Theory Approach,” “Importance Of Traditional Healing Principles In End Of Life Care To Patients In Kampala, Uganda,” and “An Exploration Of Attitudes Towards Weight Management Counseling Among Physicians And Patients In Pediatric Obesity Clinics.”

Preliminary results from these projects were presented at a local research symposium and, to date, two have been presented at national meetings. Mentored students have expressed interest in continuing their SBS training in residency and fellowships. All students will be tracked to evaluate pipeline impact.

In project years 4-5, the SBS Pipeline has been expanded to shape the new UCSF Pathways to Discovery program designed to provide additional research and leadership skills across all trainees and all sciences. SBS faculty will create a “Health and Society Pathway” to support SBS research, health disparities research, and scholarly work in health policy. In addition to medical students, the pipeline will be expanded to include medical residents and trainees from nursing, pharmacy, and dentistry.

2. Creation and validation of global SBS competencies promoted and disseminated using electronic curriculum mapping and other innovative assessment tools.

An “ideal” SBS competencies curriculum was created and compared to the “actual” UCSF SBS curriculum to identify high priority curricular needs. To create the “ideal curriculum, expert resources and professional societies were used to create a comprehensive, content list followed by a stringent winnowing process to establish core content based on a “need to know” principle. A national survey of medical school faculty was then used to validate and refine the already truncated core content list. A one page survey for each IOM content domain was created and electronically mailed to n=547 faculty (n=204 completed surveys, 37% response rate). Each survey listed 25-30 proposed content items rated on a 1-5 Likert scale reflecting importance. Results validated the curricular needs described in the 2004 IOM report and identified important curricular “hooks” or ways to package new SBS materials.

The “actual” UCSF SBS curriculum was assessed using a keyword, electronic search of all teaching sessions in all years. Search keywords (n=370 total for all 6 content areas) were determined by grant personnel for each of the IOM content domains using the SBS ideal curriculum list and the MeSH thesaurus. A total of 1,444 SBS keyword “hits” were found in current curricular materials. Each “hit” prompted a hand-review of that teaching session and teaching materials to ascertain SBS content, depth, and teaching techniques. To better capture clinical content, all clerkship directors completed a one hour semi-structured SBS interview covering content topics for all 6 IOM content areas. Transcribed notes from each

interview were compiled and combined with electronic search results. Copies of clerkship teaching materials (e.g. seminar handouts, slide sets) were collected and evaluated whenever possible. At the completion of the review of electronic teaching materials and clerkship interviews, 6 UME curricular maps were created to correspond with the 6 IOM areas.

Initial analysis of the curriculum maps identified major curricular omissions, redundancies, and opportunities for greater coordination. Coverage of basic foundational knowledge in MS1-2 was deemed adequate with a few notable omissions – PNI, diversity, and health policy basics. Opportunities to improve the scientific rigor of current SBS sessions were noted (e.g. further elaboration of the biobehavioral pathways between stress and disease). As anticipated, the greatest area of need and opportunity was in the clinical clerkships where most of our subsequent efforts have been targeted (see #3 below).

3. Construction of enduring curricular infrastructures and processes to support greater “institutional penetrance” of the social and behavioral sciences and shared ownership of core clinical competencies.

Institutional buy-in has been carefully cultivated to ensure project continuation. By supporting identified SBS leaders, promoting SBS research, and melding a new SBS teaching infrastructure into the integrated UCSF curriculum, this project challenges the prevailing biomedical attitudes that SBS is “soft” or simply not as important as the basic and clinical sciences. Key SBS project faculty include basic, clinical, social and behavioral scientists who are also key leaders in different areas of the undergraduate medical curriculum. Highly visible student involvement improves the acceptability and value given to curricular products. Mentor recruitment and faculty development programs create an enduring resource for future SBS teaching and research.

A primary goal of the UCSF project is to carry-forward SBS curricula into the clerkship year (MS3) where students are often trained to devalue SBS content. After the interviews described in #2 above, an SBS liaison was assigned to each clerkship to shepherd a uniquely tailored process of curricular revisions matched to each clerkship’s needs and resources. SBS faculty serve as consultants but enlist permanent clerkship faculty to develop and implement the SBS innovations. Examples of innovations include:

- SBS Telephone Follow-up Project: all students at one hospital are required to complete outpatient follow-up phone calls to check patient comprehension, retention of action plan, and adherence.
- Biopsychosocial (BPS) Formulations: Psychiatry and Family Medicine clerkship students are required to complete a detailed BPS formulation on 2 patients with emphasis on treatment adaptations and promoting adherence.
- SBS Case Conference “One-Page Teaching Pearls”: Pithy, one-page summary sheets of core SBS-based skills were created and disseminated to all clerkship case conferences.

Redesigning and Enhancing Behavioral and Social Science Curricula

NICHHD Grant K07 HD051546

Alan W. Cross, MD

The UNC curriculum project focuses upon the 6 domains and 26 priorities highlighted by the Institute of Medicine's 2004 report *Improving Medical Education: Enhancing the Behavioral and Social Science Content of Medical School Curricula*, with the addition of an institution-specific priority that focuses upon negotiating between the patient's values and the culture of medicine.

Top Three Accomplishments:

Curriculum Impact

We set out to create a longitudinal curriculum strand on culture and communication that built upon a good introduction in the basic science years and developed through clerkship components. We have already introduced this into the pediatrics clerkship through a communication assessment in the newborn nursery rotation, as well as a cultural sensitivity narrative and a faculty education series. In the fourth year, we are now introducing modules on the cultural and ethical underpinnings of communication for deployment in a new fourth-year "integration" course requirement in 2009. Didactic and discussion-based elements will include doctor-to-doctor communication, patient handoff, and consent.

Narrative Enrichment

One goal of our endeavor is to instill in our students a habit of critical reflection on the social science, behavioral and values dimensions of health and the work of doctors. We use a narrative focus supported by interventions in the pediatrics and medicine clerkships to provide specific opportunities for student reflection and serve as models for other work across the curriculum. The narrative approach, as elicited through patient encounters and improved communications with patients, will enable graduates to better understand the full spectrum of the experience of illness. Collaborations with Surgery and Social Medicine faculty have also supported the formation of literature and medicine groups that provide structured opportunities for reading, writing, discussion and reflection. Critical and trauma care staff have comprised the first of these groups, which will be expanded to include primary care faculty and fourth-year medical students. These groups are representative of the ways in which this grant's priorities have begun to infiltrate the culture of the entire institution.

Institutional Change

The grant has provided a platform to achieve significant institutional change within the curriculum. Dr. Cross, the PI, serves on nearly all the curriculum-related committees and uses every opportunity to promote innovations. In November, he is taking the lead in convening a School-wide curriculum retreat that brings together all the curriculum leadership to review the current curriculum and launch a new set of curricular reforms. This forum will provide new opportunities for extending the teaching of behavioral and social sciences into the clinical years.

BASIC Training in Medicine: Behavioral and Social Sciences Integrated Curriculum

NICHD Grant K07 HD051507

Susan Skochelak, MD, MPH

The University of Wisconsin School of Medicine and Public Health (UW SMPH) is in the process of a comprehensive curriculum transformation across all four years of medical education. The goal of the curriculum transformation is to integrate the core principals of public health and population medicine with the teaching of traditionally focused medical education. Understanding the behavioral and social science content of determinants of health is key to transforming the way that graduates of our new curriculum integrate public health content and practice into new strategies to address the full spectrum of health and disease.

The UW SMPH has defined competency outcomes for medical students in the six curricular domains of the Institute of Medicine's 2004 report *Improving Medical Education: Enhancing the Behavioral and Social Science Content of Medical School Curricula* for each year of medical education. New BASIC curriculum has been developed for three of the domains that our institution defined as focused topics for curricular enhancement: Cultural competence, professionalism and health care system/economics/public health.

Top Three Accomplishments:

Professionalism: The UW SMPH has developed a comprehensive approach to addressing issues of professionalism with medical students across all years of education. Attributes of professionalism were defined and strategies to incorporate teaching, role modeling and peer support were identified in the traditional curriculum as well as for the "hidden curriculum". All entering medical school classes now write an oath of professionalism that is incorporated into the white coat ceremony during the first year of medical school. A class mentor system has been established that matches faculty to students within small group learning communities, where cases that present with professional or ethical dilemmas are discussed regularly. Orientation, transitional clerkship and third year core curriculum events all include content on professionalism. Students are now evaluated on selected attributes of professionalism in most courses and all clerkships. Longitudinal data indicates that rates of medical student mistreatment – including peer-to-peer and faculty-to-student reports – have declined since the introduction of this curriculum.

Cultural Competency: New content on cultural competency has been added to core courses in all four years of medical school training. An assessment of the content of this curriculum was done using the AAMC TACCT (Teaching and Assessing Cultural Competency Training) instrument. Missing content was identified and added, new assessment methods have been piloted, including the use of standardized patients who are selected from a pool of subjects purposefully recruited for more diversity in multiple dimensions: race, ethnicity, age, abilities and sexual orientation. A new experiential course has been piloted: Intercultural Communication in Health Care, which includes extensive discussion with patients and health care teams. Finally, an electronic portfolio to document learning in the domain of cultural competence is being tested to determine if this assessment method –used in educational psychology counseling – can be adapted to medical student education.

Health Care Systems/Economics/Public Health: New content in this domain has been added into the first, second and fourth year medical student curriculum within existing courses: Patient, Doctor and Society I – IV and the capstone Preceptorship required clerkship. A new three credit

required course, Population and Public Health, has been added to the first year of training to allow in depth teaching of the basic science of these content areas. Monthly integrated case discussions have been developed for the first and second year students to bring together the basic biomedical, behavioral and social science content together with public health and societal implications of the particular topics under discussion. These cases include topics like prematurity and infant mortality, organ transplantation, obesity, diabetes, chronic pain management and other discipline spanning conditions or concerns.

Institutional impact: The UW SMPH has provided matching funds from the Wisconsin Partnership Program to support the education innovations that have been developed from the BASIC Training in Medicine award. A comprehensive curriculum transformation plan – a product of two years of planning (and still ongoing) – was implemented this September for our entering first year medical students. The new curriculum implementation will follow each successive year as this class advances, although significant new curricular elements have already been added to the current curriculum as described above. The complete redesign of the UW SMPH medical student curriculum – with the goal of integrating public health and traditional medical education – has opened the architecture of the curricular structure to allow for significant and meaningful change across all years of medical student education. Student assessment and program evaluation methods have been designed to assess the impact of these innovative curricular changes.